

BEST AVAILABLE COPY**Amendments to the Claims:**

1. (Currently Amended) A method of forming an interconnect in a substrate which includes one or more dielectric layers and a copper deposit, said method comprising: forming a trench in the substrate, said trench having sides; forming a via in the substrate to the copper deposit, said via having sides; depositing an interconnect liner layer of aluminum-0.5% copper alloy in the trench and via and along the sides of the trench and via; depositing copper onto the aluminum-0.5% copper alloy interconnect liner layer; and polishing the copper level with the interconnect liner layer and at least one dielectric layer of the substrate, wherein the interconnect liner layer is a permanent component of the interconnect and does not interact with the copper or copper deposit to form an alloy at any time while the method is performed.

2. (Previously Presented) A method as recited in claim 1, wherein the step of depositing a layer of aluminum-0.5% copper alloy comprises using a PVD technique.

3. (Currently Amended) A method of forming an interconnect in a substrate which includes one or more dielectric layers and a copper deposit, said method comprising: forming a trench in the substrate, said trench having sides; forming a via in the substrate to the copper deposit, said via having sides; depositing an intermediate liner layer in the trench and via, along the sides of the trench and via, and on the copper deposit; depositing an interconnect liner layer of aluminum-0.5% copper alloy on the intermediate layer; depositing copper onto the aluminum-0.5% copper alloy; and polishing the copper level with the interconnect liner layer and at least

Serial No.: 10/615,042

Art Unit: 2815

Page 2

BEST AVAILABLE COPY

one dielectric layer of the substrate, wherein the interconnect liner layer is a permanent component of the interconnect and does not interact with the copper or copper deposit to form an alloy at any time while the method is performed.

4. (Previously Presented) A method as recited in claim 3, wherein the step of depositing a layer of aluminum-0.5% copper alloy comprises using a PVD technique.

5. (Original) A method as recited in claim 3, wherein the step of depositing an intermediate liner layer comprises depositing Ta/TaN.

6. (Currently Amended) An interconnect in a substrate which includes one or more dielectric layers, said interconnect comprising a first copper deposit, a second copper deposit, and an aluminum-0.5% copper alloy interconnect liner disposed between and in contact with the first and second copper deposits and between the second copper deposit and at least one of the dielectric layers, wherein the second copper deposit is disposed between two surfaces of the interconnect liner and is polished level with the interconnect liner and at least one dielectric layer of the substrate, wherein the interconnect liner is a permanent component of the interconnect and is not combined with either of the copper deposits to form an alloy.

7. (Previously Presented) An interconnect as recited in claim 6, wherein the aluminum-copper alloy interconnect liner has been deposited using a PVD technique.

Serial No.: 10/615,042
Art Unit: 2815
Page 3

BEST AVAILABLE COPY

8-14. (Cancelled)

Serial No.: 10/615,042

Art Unit: 2815

Page 4